

IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1. (Currently Amended) A communication apparatus comprising:

a propagation path condition estimation section that estimates a speed of a change in a propagation path condition;

a communication quality estimation section that changes a method of estimating a ~~the~~ communication quality of a received signal, based on the estimated speed of the change in the propagation path condition, and estimates the communication quality;

a transmission section that transmits the estimated communication quality ~~estimated in the communication quality estimation section~~ to a communicating party;

a reception section that receives data modulated in a modulation scheme determined by the communicating party based on the estimated communication quality ~~by the communicating party~~; and

a demodulation section that demodulates the received data.

2. (Currently Amended) A communication apparatus comprising:

a propagation path condition estimation section that estimates a speed of a change in a propagation path condition;

a communication quality estimation section that changes a ~~an estimation~~ method of estimating a communication quality of a received signal, based on the estimated speed of the change in the propagation path condition, and estimates the communication quality;

a threshold setting section that sets a criterion for selecting, from a plurality of modulation schemes, to select a modulation scheme for use in communication with a communicating party, ~~from a plurality of modulation schemes~~ based on information of the estimated speed of the change in the propagation path condition;

a modulation scheme selection section that selects the a modulation scheme based on ~~from the estimated~~ communication quality and by the set criterion ~~set by the threshold setting section~~; and

a transmission section that transmits information of indicating the selected modulation scheme to the communicating party.

3. (Currently Amended) The communication apparatus according to claim 1, wherein the communication quality estimation section makes a longer length of a term for averaging the communication quality when the estimated speed of the change in the propagation path condition is fast, and makes longer than another the length of another the term for averaging the communication quality shorter than the longer length when the estimated speed of the change in the propagation path condition is slower than the fast estimated speed of the change in the propagation condition slow, and averages the information of the communication quality for the longer length and the shorter length to estimate the communication quality.

4. (Currently Amended) The communication apparatus according to claim 1, wherein the communication quality estimation section estimates the communication quality by a plurality of estimation methods, and selects the communication quality estimated by one of the plurality of estimation methods, based on the estimated speed of the change in the propagation

path condition.

5. (Currently Amended) The communication apparatus according to claim 4, wherein ~~the communication quality estimation section estimates the communication quality by a plurality of estimation methods, and an~~ the estimation method to estimate the communication quality is ~~be~~-selected when the estimated speed of the change in the propagation path condition is faster than a predetermined threshold, and the communication quality estimation section estimates a longer length of a ~~the~~ term used in the selected estimation method than another term used in another ~~an~~ estimation method to be selected when the estimated speed of the change in the propagation path condition is slower than the predetermined threshold.

6. (Currently Amended) The communication apparatus according to claim ~~4~~ 5, wherein the communication quality estimation section ~~estimates the communication quality by a plurality of estimation methods, and~~ estimates a frame error rate when the estimated speed of the change in the propagation path condition is faster than another a predetermined threshold, while estimating a received power to noise ratio when the estimated speed of the change in the propagation path condition is slower than the other predetermined threshold.

7. (Currently Amended) A communication apparatus comprising:
a reception section that receives information of a speed of a change in a propagation path condition, the speed of the change in the propagation path condition being estimated by a communicating party;

a threshold setting section that sets a criterion for selecting, from a plurality of modulation schemes, ~~to select~~ a modulation scheme of a signal to be transmitted to the communicating party, ~~from a plurality of modulation schemes~~ based on the information of the estimated speed of the change in the propagation path condition;

a modulation scheme selection section that selects the a modulation scheme based on the set criterion ~~set by the threshold setting section~~ and reception quality of a signal received by ~~in~~ the communicating party;

an adaptive modulation section that modulates data in the selected modulation scheme ~~selected in the modulation scheme selection section~~; and

a transmission section that transmits the modulated data by a radio signal.

8. (Currently Amended) The communication apparatus according to claim 2, wherein the threshold setting section sets the criterion so that the modulation scheme is harder to be switched in a threshold when the estimated speed of the change in the propagation path condition is fast, than in another a threshold when the estimated speed of the change in the propagation path condition is slow.

9. (Currently Amended) The communication apparatus according to claim 1, wherein the propagation path condition estimation section divides the received signal into predetermined data sizes, detects fluctuation in reception quality on a basis of divided data, and thereby estimates the speed of the change in the propagation path condition.

10. (Currently Amended) A communication method, comprising: ~~wherein:~~

at the receiving side,

estimating ~~a receiving side estimates~~ speed of a change in a propagation path condition;

changing ~~changes~~ a method of estimating a communication quality of a received signal, based on the estimated speed of the change in the propagation path condition, to estimate ~~the estimates~~ communication quality; and

transmitting ~~transmits~~ information of the estimated communication quality and information of the estimated speed of the change in the propagation path condition, to a transmitting side;

at the transmitting side,

receiving ~~the transmitting side receives~~ the information of the estimated communication quality and the information of the estimated speed of the change in the propagation path condition, both transmitted from the receiving side;

setting ~~sets~~ a criterion for selecting, from a plurality of modulation schemes, to select a modulation scheme of a signal to be transmitted to the receiving side, ~~from a plurality of modulation schemes~~ based on the received information of the estimated speed of the change in the propagation path condition;

selecting ~~selects~~ the modulation scheme based on the set criterion and the received information of the estimated communication quality, ~~of a signal received at the receiving side,~~

modulating ~~modulates~~ data in the selected modulation scheme; and

transmitting ~~transmits~~ the modulated data by a radio signal; and

at the receiving side,

receiving ~~the receiving side receives~~ the modulated data transmitted from the transmitting side; and

~~modulated in the modulation scheme determined by the transmitting side, and~~

demodulating the received modulated ~~demodulates the data.~~

11. (Currently Amended) A communication method, comprising wherein:
at a receiving side,

estimating a ~~receiving side estimates~~ speed of a change in a propagation path condition;

changing a ~~estimates communication quality, changing an estimation method of~~
estimating a communication quality of a received signal, based on the estimated speed of the change in the propagation path condition, to estimate the communication quality;

setting ~~sets~~ a criterion for selecting, from a plurality of modulation schemes, to select a modulation scheme of a signal that ~~for a transmitting side transmits to be transmitted~~ to the receiving side, ~~from a plurality of modulation schemes based on the estimated~~ speed of the change in the propagation path condition;

selecting the ~~selects~~ a modulation scheme based on ~~from the estimated~~ communication quality and ~~of a received signal by~~ the set criterion;

transmitting ~~transmits~~ information of ~~indicating~~ the selected modulation scheme to the transmitting side;

at the transmitting side,

receiving ~~the transmitting side receives~~ the information of ~~indicating~~ the selected modulation scheme transmitted from the receiving side; ~~selected at the receiving side;~~

~~modulating~~ modulates data in the selected modulation scheme; and
~~transmitting~~ transmits the modulated data by a radio signal; and
~~at the receiving side,~~

~~receiving the receiving side receives the~~ modulated data ~~modulated from the~~
~~transmitting side; by the transmitting side in the selected modulation scheme, and~~
~~demodulating the received modulated~~ demodulates the data.

12. (New) The communication apparatus according to claim 1, wherein either a fading pitch, moving speed of a mobile station, delay profile, or fluctuation period of receiving signal power is used as a parameter indicating the estimated speed of the change in the propagation path condition.